

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

Claims 1-3 (canceled)

4. (currently amended) A rotary cutting tool having a shank that extends to a cutting region, the cutting region terminates in a cutting tip, a plurality of flutes formed within the cutting region with each flute beginning at the cutting tip and terminating at a distal location towards the shank, and a cutting edge formed along an outer border of each flute, wherein each said flute comprises:

- a) a first helical-pitch proximate the cutting tip and
- b) a second helical-pitch proximate the terminating distal location with a gradual transition of said flute from said first helical-pitch to said second helical-pitch, wherein each said flute has said helical pitch gradual transition running opposite to a previous or subsequent flute.

5. (original) A rotary cutting tool according to Claim 4, wherein each flute has said first helical-pitch is about 10° to about 60°, said second helical-pitch is from about 60° to about 10° and said first and said second helical-pitches do not equal one

another.

6. (original) A rotary cutting tool according to Claim 4, wherein each said flute has said first helical-pitch is about  $30^{\circ}$  to about  $40^{\circ}$ , said second helical-pitch is from about  $40^{\circ}$  to about  $30^{\circ}$  and said first and said second helical-pitches do not equal one another.

7. (original) A rotary cutting tool according to Claim 4, wherein each adjacent flute has said first and said second helical-pitches reversed with said first helical-pitch about  $10^{\circ}$  to about  $60^{\circ}$ , said second helical-pitch from about  $60^{\circ}$  to about  $10^{\circ}$  and said first and said second helical-pitches do not equal one another.

8. (original) A rotary cutting tool according to Claim 4, wherein each adjacent flute has said first and said second helical-pitches reversed with said first helical-pitch about  $30^{\circ}$  to about  $40^{\circ}$ , said second helical-pitch from about  $40^{\circ}$  to about  $30^{\circ}$  and said first and said second helical-pitches do not equal one another.

9. (currently amended) A rotary cutting tool having a shank that extends to a cutting region, the cutting region terminates in a cutting tip, a plurality of paired flutes formed within the cutting region with each flute having a variable helical-pitch and beginning at the cutting tip and terminating at a distal location towards the shank, and a cutting edge formed along an outer border of each flute, wherein for each pair of flutes each said flute within the pair has an identical variable helical-pitch and comprises:

- a) a first helical-pitch proximate the cutting tip and
- b) a second helical-pitch proximate the terminating distal location with a gradual transition of said flute from said first helical-pitch to said second helical-pitch, wherein each said flute has said helical pitch gradual transition running opposite to a previous or subsequent flute.

10. (original) A rotary cutting tool according to Claim 9, wherein each flute has said first helical-pitch from about  $10^{\circ}$  to about  $60^{\circ}$ , said second helical-pitch from about  $60^{\circ}$  to about  $10^{\circ}$  and said first and said second helical-pitches do not equal one another.

11. (original) A rotary cutting tool according to Claim 9, wherein each said flute has said first helical-pitch about  $30^{\circ}$  to about  $40^{\circ}$ , said second helical-pitch from about  $40^{\circ}$  to about  $30^{\circ}$  and said first and said second helical-pitches do not equal one another.

12. (original) A rotary cutting tool according to Claim 9, wherein each adjacent flute has said first and said second helical-pitches reversed with said first helical-pitch about  $10^{\circ}$  to about  $60^{\circ}$ , said second helical-pitch from about  $60^{\circ}$  to about  $10^{\circ}$  and said first and said second helical-pitches do not equal one another.

13. (original) A rotary cutting tool according to Claim 9, wherein each adjacent flute has said first and said second helical-pitches reversed with said first helical-pitch

about 30° to about 40°, said second helical-pitch from about 40° to about 30° and said first and said second helical-pitches do not equal one another.

14. (original) A rotary cutting tool according to Claim 9, wherein each said flute within a pair of flutes is aligned directly across from one another and each pair of flutes is off-set from any other pair of flutes by between about 1° to about 10°.

15. (new) A rotary cutting tool having a shank that extends to a cutting region, the cutting region terminates in a cutting tip, a plurality of paired flutes formed within the cutting region with each flute having a variable helical-pitch and beginning at the cutting tip and terminating at a distal location towards the shank, and a cutting edge formed along an outer border of each flute, wherein each said flute within said pair of flutes is aligned directly across from one another and each said pair of flutes is off-set from any other said pair of flutes by between about 1° to about 10°, wherein for each said pair of flutes each said flute within said pair has an identical variable helical-pitch and comprises:

- a) a first helical-pitch proximate the cutting tip and
- b) a second helical-pitch proximate the terminating distal location with a gradual transition of said flute from said first helical-pitch to said second helical-pitch, wherein each said flute has said helical pitch gradual transition running opposite to a previous or subsequent flute.